CLAIMS

- 1. An anti-CEA antibody ("806.077 Ab") comprising complementarity determining regions (CDRs) in which the CDRs comprise the following sequences:
- 5 a) heavy chain

CDR1 DNYMH (SEQ ID NO: 29)

CDR2 WIDPENGDTE YAPKFRG (SEQ ID NO: 31)

CDR3 LIYAGYLAMD Y(SEQ ID NO: 32); and

- b) light chain
- 10 CDR1 SASSSVTYMH (SEQ ID NO: 26)

CDR2 STSNLAS (SEQ ID NO: 27)

CDR3 QQRSTYPLT (SEQ ID NO: 28).

2. An antibody according to claim 1 in which the heavy chain CDRs 1 and 3 are further 15 defined as:

CDR1 FNIKDNYMH (SEQ ID NO: 30); and

CDR3 HVLIYAGYLA MDY (SEQ ID NO: 33).

- An antibody according to claim 1 comprising the following, optionally humanised,
- 20 structure:

NUG

a heavy chain variable region sequence (SEQ ID NO: 11)

EVOLOOSGAE LVRSGASVKL SCTASGFNIK DNYMHWVKQR 40
PEQGLEWIAW IDPENGDTEY APKFRGKATL TADSSSNTAY 80
LHLSSLTSED TAVYYCHVLI YAGYLAMDYW GQGTSVAVSS 120

25 and:

a light chain variable region sequence (SEQ ID NO: 9):

DIELTQSPAI MSASPGEKVT ITCSASSSVT YMHWFQQKPG 40
TSPKLWIYST SNLASGVPAR FSGSGSGTSY SLTISRMEAE 80
DAATYYCQQR STYPLTFGAG TKLELKRA 108

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- 4. A humanised antibody according to claim 3 comprising at least one of the following sequences:
- a heavy chain variable region sequence which is VH1 (SEQ ID NO: 55);





- 197 -

- a light chain variable region sequence which is VK4 (SEQ ID NO: 71);
- a human CH1 heavy chain IgG3 constant region;
- a human kappa light chain CL region; and
- a human IgG3 hinge region;
- 5 optionally in the form of a F(ab')2 fragment.
 - A conjugate comprising an antibody according to any preceding claim and an effector moiety.
- 10 6. A conjugate according to claim 5 in which the effector moiety is selected from any one of the following:
 - a) an enzyme suitable for use in an ADEPT system;
 - b) CPG2;
 - c) [G251T,D253K]HCPB;
- 15 d) [A248S,G251T,D253K]HCPB;
 - e) a co-stimulatory molecule;
 - f) extracellular domain of B7;
 - extracellular domain of human B7.1; and
 - h) extracellular domain of human B7.2;
- 20 optionally in the form of a fusion protein.
 - A conjugate according to claim 6 which is a fusion protein selected from any one of
 the following conjugates, (sequences being listed in N terminus to C terminus direction):
 - a) a humanised 806.077 F(ab')_2 {[A248S,G251T,D253K]HCPB}₂ fusion comprising:
- 25 an antibody Fd' chain of structure VH1(SEQ ID NO: 55)/CH1 constant region from IgG3/hinge region from IgG3;

the Fd' chain being fused via its C terminus to the N terminus of [A248S,G251T,D253K]HCPB; and

an antibody light chain of formula VK4(SEQ ID NO: 71)/CL region from kappa light chain;

30 b) {[A248S,G251T,D253K]HCPB}₂-humanised 806.077 F(ab')₂ fusion comprising: [A248S,G251T,D253K]HCPB:

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the HCPB being fused at its C terminus, via a (GGGS)₃ linker, to the N terminus of an antibody Fd' chain of structure VH1(SEQ ID NO: 55)/CH1 constant region from IgG3/hinge region from IgG3; and

an antibody light chain of formula VK4(SEQ ID NO: 71)/CL region from kappa light chain;

- 5 and
 - a (human B7.1 extracellular domain)₂ humanised 806.077 F(ab')₂ fusion comprising:

human B7.1 extracellular domain;

- the B7.1 being fused at its C terminus to the N terminus of an antibody Fd' chain of structure

 VH1(SEQ ID NO: 55)/CH1 constant region from IgG3/hinge region from IgG3; and
 an antibody light chain of structure VK4(SEQ ID NO: 71)/CL region from kappa light chain.
 - A polynucleotide sequence capable of encoding a polypeptide of an antibody or a conjugate as defined in any preceding claim.
 - 9. A vector comprising a polynucleotide as defined in claim 8.
 - 10. A host cell transformed with a polynucleotide sequence as defined in claim 8 or a transgenic non-human animal or transgenic plant developed from the host cell.
 - Hybridoma 806.077 deposited as ECACC deposit no. 96022936.
- A pharmaceutical composition comprising a conjugate as defined in any preceding claim in association with a pharmaceutically-acceptable diluent or carrier, optionally in a form
 suitable for intravenous administration.
 - 13. A conjugate as described in any preceding claim for use as a medicament.
- 14. A method of making an antibody or a conjugate as defined in any preceding claim 30 which comprises:
 - subjecting a host cell, a transgenic non-human mammal or a transgenic plant as defined in claim 10, or the hybridoma of claim 11, to conditions conducive to expression, and



- 199 -

optionally secretion, of the antibody or conjugate; and optionally

- b) at least partially purifying the antibody or conjugate.
- 15. A method of treatment of a human or animal in need of such treatment which
 5 comprises administration to a human or animal of a pharmaceutically effective amount of a conjugate as defined in any preceding claim.